

SEQUENCE LISTING

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 Schwartz, John
 Das Gupta, Ruchira

<120> Engineered Stimulus-Responsive Switches

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<160> 20

<170> PatentIn version 3.0

<210> 1

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Zinc finger consensus sequence

<220>

<221> misc_feature

<222> (2)..(3)

<223> wherein Xaa at positions 2, 3 can be any amino acid

<220>

<221> misc_feature

<222> (5)..(7)

<223> wherein Xaa at positions 5, 6, 7 can be any amino acid

<220>

<221> misc_feature

<222> (9)..(13)

<223> wherein Xaa at positions 9, 10, 11, 12, 13 can be any amino acid

<220>

<221> misc_feature

<222> (15)..(16)

<223> wherein Xaa at positions 15, 16 can be any amino acid

<220>

<221> misc_feature

<222> (18)..(20)

<223> wherein Xaa at positions 18, 19, 20 can be any amino acid

<400> 1

Cys Xaa Xaa Cys Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa
 1 5 10 15

His Xaa Xaa Xaa His
 20

<210> 2
 <211> 22
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 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(4)
 <223> wherein Xaa at positions 2, 3, 4 can be any amino acid

 <220>
 <221> misc_feature
 <222> (6)..(8)
 <223> wherein Xaa at positions 6, 7, 8 can be any amino acid

 <220>
 <221> misc_feature
 <222> (10)..(14)
 <223> wherein Xaa at positions 10, 11, 12, 13, 14 can be any amino acid

 <220>
 <221> misc_feature
 <222> (16)..(17)
 <223> wherein Xaa at positions 16, 17 can be any amino acid

 <220>
 <221> misc_feature
 <222> (19)..(21)
 <223> wherein Xaa at positions 19, 20, 21 can be any amino acid

 <400> 2
 Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Leu Xaa
 1 5 10 15

 Xaa His Xaa Xaa Xaa His
 20

 <210> 3
 <211> 23
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(5)
 <223> wherein Xaa at positions 2, 3, 4, 5 can be any amino acid

 <220>
 <221> misc_feature

<222> (7)..(9)
 <223> wherein Xaa at positions 7, 8, 9 can be any amino acid

 <220>
 <221> misc_feature
 <222> (11)..(15)
 <223> wherein Xaa at positions 11, 12, 13, 14, 15 can be any amino acid

 <220>
 <221> misc_feature
 <222> (17)..(18)
 <223> wherein Xaa at positions 17, 18 can be any amino acid

 <220>
 <221> misc_feature
 <222> (20)..(22)
 <223> wherein Xaa at positions 20, 21, 22 can be any amino acid

 <400> 3
 Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu
 1 5 10 15

 Xaa Xaa His Xaa Xaa Xaa His
 20

 <210> 4
 <211> 21
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(3)
 <223> wherein Xaa at positions 2, 3 can be any amino acid

 <220>
 <221> misc_feature
 <222> (4)..(16)
 <223> wherein Xaa at positions 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 can be any amino acid

 <220>
 <221> misc_feature
 <223> wherein Xaa at positions 19, 20 can be any amino acid

 <400> 4
 Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

 Xaa Cys Xaa Xaa Cys
 20

 <210> 5
 <211> 7

<212> PRT
<213> Artificial Sequence

<220>
<223> target sequence for protein kinase A

<400> 5
Leu Arg Arg Ala Ser Leu Gly
1 5

<210> 6
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate for casein kinase II

<400> 6
Arg Arg Arg Glu Glu Glu Thr Glu Glu Glu
1 5 10

<210> 7
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate sequence for v-Abl tyrosine kinase

<400> 7
Glu Ala Ile Tyr Ala Ala Pro Phe Ala Lys Lys Lys
1 5 10

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 8
atcgcgacaca tgaaacaact tgaagac

27

<210> 9
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 9
tcagcggttcg ccaactaatt tc

22

<220>
 <223> primer for coding sequence of a temperature sensitive form of the lambda repressor containing an *Ava*I sit

<400> 13
 ttacaacgcc cgggtcagcc aaacgtctct tcagg 35

<210> 14
 <211> 71
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for the coding sequence of a temperature sensitive form of lambda repressor

<400> 14
 atgggcattt tctcgagtca gccggggccat accccgcattc cggcggccag cacaaaaaag 60
 aaaccattaa c 71

<210> 15
 <211> 784
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> TBD-cI repressor variant

<400> 15
 atgggcattt tctcgagtca gccggggccat accccgcattc cattaacaca agagcagcac 60
 aaaaaagaaa ccattaacac aagagcagct tgaggacgca cgtcgcctta aagcaattta 120
 tgaaaaaaag aaaaatgaac ttggcttatt ccaggaattct gtcgcagaca agatgggggat 180
 ggggcagtca ggcgttggtg ctttatttaa tggcatcaat gcattaaatg cttataacgc 240
 cgcattgctt acaaaaattc tcaaagttag cgttgaagaa tttagccctt caatcgccag 300
 agaaatctac gagatgtatg aagcggttag tatgcagccg tcaacttagaa gtgagtatga 360
 gtacctgtt catcaccatc accatcactt ttctcatgtt caggcaggga tgttctcacc 420
 taagcttaga acctttacca aaggtgatgc ggagagatgg gtaagcacia ccaaaaaagc 480
 cagtgattct gcattctggc ttgaggttga aggtaattcc atgaccgcac caacaggctc 540
 caagccaagc tttcctgacg gaatgttaat tctcgttgac cctgagcagg ctgttgagcc 600
 aggtgatttc tgcatagcca gacttggggg tgatgagttt accttcaaga aactgatcag 660
 ggatagcggc caggtgtttt tacaaccact aaaccacag taccatga tcccatgcaa 720
 tgagagttgt tccgttgtgg ggaaagttat cgctagtcag tggcctgaag agacgtttgg 780
 ctga 784

<210> 16
 <211> 61
 <212> DNA
 <213> Artificial Sequence

<220>

<223> primer for coding sequence of a temperature sensitive form of
 lambda repressor

<400> 16
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagctt 60
 g 61

<210> 17
 <211> 545
 <212> DNA
 <213> Artificial Sequence

<220>

<223> TBD-cI-bZIP repressor variant

<400> 17
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagcac 60
 aaaaaagaaa ccattaacag gacgcacgtc gccttaaagc aatttatgaa aaaaaagaaa 120
 atgaacttgg cttatcccag gaatctgtcg cagacaagat ggggatgggg cagtcaggcg 180
 ttggtgcttt atttaatggc atcaatgcat taaatgctta taacgccgca ttgcttacia 240
 aaatttctcaa agtttagcgtt gaagaattta gcccttcaat cgccagagaa atctacgaga 300
 tgtatgaagc ggtagtatg cagccgtcac ttagaagtga gtatgagtag cctgtttttt 360
 ctcatgttca ggcagggatg ttctcaccta agcttagaac ctttaccaaa ggtgatgcgg 420
 agcgtctgggt aagcatcgcg cacatgaaac aacttgaaga caagggttgaa gaattgcttt 480
 cgaaaaatta tcacttgga aatgagggtt ccagattaaa gaaattagtt ggcgaaacgt 540
 ga 542

<210> 18
 <211> 525
 <212> DNA
 <213> Artificial Sequence

<220>

<223> TBP-cI-bZIP repressor variant with a deletion

<400> 18
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagctt 60
 gaggacgcac gtcgccttaa agcaatttat gaaaaaaga aaaatgaact tggcttatcc 120
 caggaatctg tcgcagacaa gatggggatg gggcagtcag gcgttggtgc tttatttaat 180

ggcatcaatg cattaaatgc ttataacgcc gcattgctta caaaaattct caaagttagc 240
 gttgaagaat ttagcccttc aatcgccaga gaaatctacg agatgtatga agcggttagt 300
 atgcagccgt cacttagaag tgagtatgag taccctgttt tttctcatgt tcaggcaggg 360
 atgttctcac ctaagcttag aacctttacc aaaggtgatg cggagcgctg ggtaagcatc 420
 gcgcacatga aacaacttga agacaagggt gaagaattgc ttctgaaaaa ttatcacttg 480
 gaaaatgagg ttgccagatt aaagaaatta gttggcgaac gctga 525

<210> 19
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer containing sequence for a weak constitutive tetracycline
 resistance promoter

<400> 19
 gtttgacagc ttatcatcga atagctttaa tgcgctagct agacaagtac tc 52

<210> 20
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer containing sequence for a weak constitutive tetracycline
 resistance promoter

<400> 20
 gagtacttgt ctagctagcg cattaaagct attcgatgat aagctgtcaa ac 52